AXMINSTER TOOL CENTRE

Axminster Pillar Drills

700092 WD16F
Floor Pillar Drill

700091 WD16B
Bench Pillar Drill

700100 ED16B2
Bench Pillar Drill

700101 ED16SB
Bench Pillar Drill

700090 WD13S
700099 WD13L
Bench Pillar Drills

951645 WD16SB
Bench Pillar Drill

CE

Axminster Reference No's:
WD16B, WD16F, WD13S, WD13L, ED16B2, WD16SB

700090,700091,700092,700099
700100,700101,951645

User Manual

AXMINSTER WHITE

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CE Declaration of Conformity

The undersigned,

authorised by Laizhou Light Industry Machinery Plant
No. 989 Laizhou North Road, Laizhou, Shandong
261400, China
declares that this product:

ZQJ4119-3
Drill Press

manufactured by Laizhou Light Industry Machinery Plant is in compliance with the following standards or standardisation documents in accordance with Council Directives

DIN EN 60204-1:1998-11
Machinery Directive 98/37/EEC, Annex 1
Amended 93/68/EEC

The undersigned,

authorised by Laizhou Plant Machinery Co., Ltd
989 North Lasi Zhou Road Laizhou, Shandong
declares that this product:

ZQJ4113,ZQJ4119K
Drill Press

manufactured by Laizhou Plant Machinery Co. is in compliance with the following standards or standardisation documents in accordance with Council Directives

Copied from CE Certificate

The undersigned,

authorised by Shandong Laizhou Light Industry Machinery Plant
No. 989, North Lai Zhou Road Laizhou,
Shandong 261400 P. R. China

declares that this product

ZQJ4116Q
Drill Press

manufactured by Shandong Laizhou Light Industry Machinery Plant is in compliance with the following standards or standardisation documents in accordance with Council Directives

EN 55014-1: 1993+A1
EN 61000-3-2: 1995+A13
EN 61000-3-3: 1995
EN 55014-2: 1997

Quantity	Item	Model Number
1 No.	Axminster Medium Engineers Drill Press	ZQJ4119-3
1 No.	Base	ZQJ4113,ZQJ4119K
1 No.	Drill Pillar complete with Mounting Flange,	ZQJ4116Q
	Rise and Fall Rack and Rack Retaining Ring	
I No.	Drill Table Mounting Bracket	
1 No.	Drill Table	
1 No.	Tri- Lever Feed Handle	
1 No.	Drill Guard	
1 No. Pkt containing:-		
4 No.	M10 x 25mm Hexhead Bolts and M10 Spring and Plain Washers	
1 No.	6mm Allen Key	
1 No.	5mm Allen Key	
1 No.	3mm Allen Key	
1 No. Pkt containing:-		
1 No.	Windlass Handle for Table Rise and Fall Mechanism	
1 No.	Drill Taper Arbor for the Chuck	
1 No.	Break Taper Drift	
1 No.	Box Containing 3-16mm B16 Keyless Chuck	
1 No.	Box Containing 13mm B16 Keyless Chuck	
1 No.	Manual	
1 No.	Guarantee Card	

Having unpacked your machine and its accessories, please check the contents against the equipment list "What's in the box", if there are any discrepancies, please contact Axminster Power Tool Centre using the procedures laid down in the catalogue. Please dispose of the packaging responsibly; much of the material is bio-degradable. The machine and its accessories will arrive coated with heavy corrosion preventative grease and greased wax paper or plastic wrapping. These will need to be cleaned from the machine, its components and accessories prior to it being set up and commissioned. Use paraffin or a proprietary degreaser to remove the barrier grease. Be warned, it will stain if you splash it on clothing etc.; wear overalls, coverall et al., rubber gloves are also a good idea, as is eye protection if your cleaning process tends to be a little bit enthusiastic. After cleaning, lightly coat the exposed metal surfaces of the machine with a thin layer of light machine oil. N.B If you used paraffin/kerosene make sure you apply this thin film sooner rather than later.

Please read the Instruction Manual prior to using your new machine; as well as the installation procedure, there are daily and periodic maintenance recommendations to help you keep your machine on top line and prolong its life. Keep this Instruction Manual readily accessible for any others who may also be required to use the machine.

General Safety Instructions Mains Equipment

Work Place/Environment/Installation

Mains Powered Machines

Primary Precautions

These machines are supplied with a moulded 13 Amp. Plug and 3 core power cable. Before using the machine inspect the cable and the plug to make sure that neither are damaged. If any damage is visible have the machine inspected/repaired by a suitably qualified person. If it is necessary to replace the plug, it is preferable to use an 'unbreakable' type that will resist damage. Only use a 13 Amp plug, make sure the cable clamp is tightened securely. Fuse at 13 Amp. If extension leads are to be used, carry out the same safety checks on them, and ensure that they are correctly rated to safely supply the current that is required for your machine. It is also recommended that the power supply outlet is the switched type, and that the supply is switched off whilst plugging in, or unplugging the machine.

General Instructions for 240v Tools

Good Working Practices/Safety
The following suggestions will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.

WARNING!! KEEP TOOLS AND EQUIPMENT OUT OF THE REACH OF YOUNG CHILDREN

Work Place/Environment
The machine is not designed for sub-aqua operation, do not use when or where it is liable to get wet. If the machine is to be used outside and it starts to rain (unusual though this would be in U.K.), stop work and move it inside. If machine has got wet; dry it off as soon as possible, with a cloth or paper towel. **Do not** use 240Va.c. powered machines anywhere within a site area that is flooded or puddled, and do not trail extension cables across wet areas. Keep the machine clean; it will enable you to more easily see any damage that may have occurred. Clean the machine with a damp soapy cloth if needs be, do not use any solvents or cleaners, as these may cause damage to any plastic parts or to the electrical components.

Keep the work area as uncluttered as is practical, this includes personnel as well as material.

(Under no circumstances should CHILDREN be allowed in work areas)

It is good practice to leave the machine unplugged until work is about to commence, also make sure to unplug the machine when it is not in use, or unattended. Always disconnect by pulling on the plug body and not the cable. Once you are ready to commence work, remove any tools used in the setting operations (if any) and place safely out of the way. Re-connect the machine. Carry out a final check e.g. check the cutting tool, drill bit, saw blade etc., is securely tightened in the machine, check you have the correct speed and function set, check that the power cable will not 'snag' etc. Make sure you are comfortable before you start work, balanced, not reaching etc. If the work you are carrying out is liable to generate flying grit, dust or chips, wear the appropriate safety clothing, goggles, gloves, masks etc., If the work operation appears to be excessively noisy, wear ear-defenders. If you wear your hair in a long style, wearing a cap, safety helmet, hairnet, even a sweatband, will minimise the possibility of your hair being caught up in the rotating parts of the machine, likewise, consideration should be given to the removal of rings and wristwatches, if these are liable to be a 'snag' hazard. Consideration should also be given to non-slip footwear, etc.

DO NOT work with cutting or boring tools of any description if you are tired, your attention is wandering or you are being subjected to distraction. A deep cut, a lost fingertip or worse; is not worth it!
DO NOT use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases. There are very expensive, very specialised machines for working in these areas, **THIS IS NOT ONE OF THEM.**
CHECK that cutters, drills, blades etc., are the correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine.
Above all, **OBSERVE....** make sure you know what is happening around you, and **USE YOUR COMMON SENSE.**

Initial Assembly Instructions

INITIAL ASSEMBLY FOR: WD16B,WD16F, ED16B2, ED16SB, WD16SB

Please read through the section entitled Identification and Description of Parts, so that you will be familiar with the terminology we will use in the manual, so that you can identify the parts quickly and easily and initial assembly will go smoothly.

WARNING The drillhead is a heavy and substantial piece of machinery, you are advised to have help to lift it clear of the box and fit it to the column.

Place the base in a convenient position (on the bench?) and place the mounting flange of the column onto the seating flange of the base. Align the holes. Use the 4 No. M10 x 25mm and the 10mm spring and plain washers and secure the column to the base. Loosen the socket grubscrew holding the cup chamfered retaining collar to the column (with the supplied allen key), remove it and the rise and fall rack, put aside. Take the drill table mounting bracket arm and twist the worm drive shaft with your fingers such that the whole shaft protrudes from the casting and the worm gear itself is clear of the square recess in the main body of the casting. Locate and fit the crank handle to the shaft, ensuring that you tighten the grub screw onto the machined flat on the shaft. This will keep the worm gear in position. Pick up the rise and fall gear rack, identify the top and the bottom, (the rack gearing is cut asymmetrically, with the gear cut extending closer to the bottom), make sure you have the rack the right way up, as it will allow you to drive the drill table up and down over its full range. Fit the rise and fall rack into the square recess in the mounting body casting, ensure that it is engaged with the pinion, and lower the combined mechanism over the column.

Allow it to slide down the column until the rise and fall rack is located in the cup chamfer in the top of the mounting flange. Replace the cup chamfered retaining collar over the column and slide it down onto the top of the rack. Lock it in place with the grubscrew, ensuring that it has captured the upper end of the rack securely, but not too tight that the rack can not be swivelled around the pillar. Check that the bracket can be driven up and down the column and can swivel around the pillar. Locate the Bristol clamping handle at the rear of the bracket and tighten, check it has 'pinched' up on the column and the bracket is immobile; both in it's up and down travel and swivel movement.

Fit the drill table, identify the Bristol clamping handle at the front of the bracket and tighten, check it has 'pinched' up on the drill table spigot and the drill table is immobile. So far so good! Now comes the heavy lift bit.

Initial Assembly Instructions (Continued)

CHECK the drillhead, ensure that the two hex socket grubscrews that lock the head in place on the column are withdrawn and will not foul on the column when the head is fitted. Put the lower assembly you have just been working on in the most convenient position, make sure it is stable and lift the drillhead over the column and let it drop into place. The column does not 'come through' the drillhead, so you don't have to worry about holding the drillhead in place whilst frantically trying to lock it in place. Set the drill head approximately fore and aft and lock in postion using the two caphead grub screws mentioned earlier. Check that the drillhead is immobile. Everything on the drilling m/c is now secured, and if you now wish to move it to its referred workplace, nothing should slew during the lift and move. Once the drilling machine is correctly positioned and, if necessary, fastened down; you can proceed with the final assembly. Locate the tri-lever feed handle and its securing screw, note the raised boss of the feed mechanism and the spigot next to it. Mount the handle over the boss and ensure the spigot hole in the handle engages the spigot on the mechanism. Secure with the supplied caphead bolt through the hole in the centre of the handle through to the tapped hole in the mounting boss. Take the chuck guard and fit to the lower bearing flange of the quill mounting. Tighten the screw and nut fastening so that the drill guard is securely held in place. Congratulations, one assembled pillar drill!

INITIAL ASSEMBLY FOR: WD13S & WD13L

Base/Column Assembly
Place the base in a convenient position (on the bench?) and place the mounting flange of the column onto the seating flange of the base. Align the holes. Use the 3 No. M8 x 20mm and the 8mm plain washers and secure the column to the base with a 13mm spanner.

Table Assembly
Locate the table/support assembly and slide it down the column until it rests on the base plate. Insert the locking clamp lever into the treaded hole to the side of the table casting, slide the table up the column to working height and clamp the table in position.

Drillhead Assembly

CAUTION: The drillhead is heavy, we recommend you seek assistance.

Using the 3mm allen key loosen the two grub screws to the right side of the head, lift the drillhead above the column and let it drop into place. The column does not 'come through' the drillhead, so you don't have to worry about holding the drillhead in place whilst frantically trying to lock it in place. Set the drillhead approximately fore and aft and lock in postion using the two caphead grub screws mentioned earlier. Check that the drillhead is immobile. Everything on the drilling m/c is now secured, and if you now wish to move it to its preferred workplace, nothing should slew during the lift and move. Once the drilling machine is correctly positioned and fastened down, it is ready for use.

Model	ED16B2	ED16SB	WD16SB
Axminster Medium Pillar Drill	700100	700101	951645
Rating	Trade	Hobby	Hobby
Motor 240V 50Hz	650W	370W	370W
Speed Range (12)	120-2580rpm	(5) 460-2890rpm	(5) 460-2890rpm
Column Diameter	80mm	60mm	60mm
Throat	178mm	127mm	127mm
Chuck to Table	310mm	315mm	315mm
Chuck to Base	510mm	430mm	430mm
Head Turn, Table Turn, Table Swivel	360˚	360˚	360˚
Table Tilt	45˚-0-45˚	45˚-0-45˚	45˚-0-45˚
Table Size	290 x 290mm	200 x 200mm	200 x 200mm
Table Fixing	Four No 'T' Slots	Four No 'T' Slots	Four No 'T' Slots
Quill Mandrel	MT2	MT2	MT2
Chuck Capacity/type	3-16mm Keyless	16mm Keyless	16mm Keyless
Chuck Travel	80mm	60mm	60mm
Machine Lamp (Fixed Integral)	</= 40W Edison Screw Bulb	Not Fitted	Not Fitted
Base Size	450 x 270mm	340 x 210mm	340 x 210mm
Overall Size L x W x H	710 x 350 x 1015mm	310 x 520 x 840mm	310 x 520 x 840mm
Weight	82kg	37kg	37kg

Specifications

Model	WD16B	WD16F	WD13S/WD13L
Axminster Medium Pillar Drilll	700091	700092	700090/700099
Rating	Trade	Trade	Hobby
Motor 240V 50Hz	550W	550W	250W
Speed Range (12)	210-2580rpm	120-2580rpm	(5) 600-2500rpm
Column Diameter	80mm	80mm	46mm
Throat	178mm	178mm	105mm
Chuck to Table	310mm	680mm WD13S	126mm
Chuck to Base	510mm	1170mm WD13S	280mm
Chuck to Table		WD13L	215mm
Chuck to Base		WD13L	370mm
Head Turn, Table Turn, Table Swivel	360˚	360˚	360˚
Table Tilt	45˚-0-45˚	45˚-0-45˚	45˚-0-45˚
Table Size	310 x 310mm	310 x 310mm	160 x 160mm
Table Fixing	Four No 'T' Slots	Four No 'T' Slots	Four No 'T' Slots
Quill Mandrel	MT2	MT2	B16
Chuck Capacity/type	3-16mm Keyless	3-16mm Keyless	13mm Keyless
Chuck Travel	80mm	80mm	50mm
Machine Lamp (Fixed Integral)	</= 40W Edison	</= 40W Edison	Not Fitted
	Screw Bulb	Screw Bulb	
Base Size	450 x 270mm	450 x 270mm	290 x180mm
Overall Size L x W x H	710 x 350 x 1015mm	710 x 350 x 1645mm	(700090 WD13S)
			240 x 470 x 600mm
			(700099 WD13L)
			240 x 470 x 735mm
Weight	80kg	88kg	19kg (WD13S)
			26kg (WD13L)

Base casting
(See fig 1)

This is the 'Stand' for the drilling m/c . It has a seating flange to the rear, which has 4 No. M10 tapped holes in the face to bolt down the column flange. There are 4 No. 12mm holes in the approximate corners of the base to enable it to be bolted to the bench or the floor depending upon the model you have purchased. There are also 2 No. slots machined in the base to enable the fastening of a machine vice or similar, if a greater working depth is needed than that available above the table.

Drill column
(See fig 1)

This is the 'pillar' of the drill, it is an 80mm diameter steel tube 800mm long. The column is fitted into a mounting flange at the lower end. This flange has four holes bored in it to correspond to the four tapped holes in the base casting. The pillar is normally supplied with the rise and fall rack for the drilling table fitted. The rise and fall rack is held in place between the cup chamfer in the mounting flange and a cup chamfered retaining collar that slides over the pillar and is held in position by a locking grubscrew.

Drill table mounting bracket
(See fig 1)
(See fig 1c)
(See fig 1d)

This is a cast bracket that fits over the column, it has a worm driven pinion that engages with the rise and fall rack and allows the bracket to be driven up and down on the column. The worm is turned by a windlass type crank handle. The rear of the casting is split and has two lugs, one bored thro' clearance for the locking clamp lever handle, and the other with a corresponding tapped hole to allow the Bristol lever clamping handle to draw the casting together and 'pinch' onto the column and lock the bracket in place. Bolted to the front of the bracket is the drill table mounting. This casting has a hole machined through it to accept the spigot of the drilling table. The casting is split similarly to the main casting with a similar clamping lever handle, which 'pinches' the casting around the drill table spigot to lock it in position. If the bolt, holding the two parts of the mounting bracket together is loosened, the drill table mounting can be tilted to enable drilling at an angle. There is a graduated scale and a pointer to enable the tilt angle to be read. Retighten the bolt when the desired angle has been set.

Drill table
(See fig 1)

The drill table is a machined casting 288mm square, with a central spigot that fits into the table mounting. The main land of the table is surrounded by a well, so that a recycling coolant system could be fitted. There are 4 radial 'T' slots cut into the main land of the table to facilitate the fixing of machine vices or clamps.

Drillhead

This is the 'drilling machine' and the descriptions of its various parts and components are detailed as follows:-

Pulley and drive Belt Cover
(See fig 2)

A pressed steel cover hinged on one side and secured with a machine screw on the other. It covers the drive belt train for safety during normal operation. There is a microswitch fitted between the cover and the lower tray which will prevent the machine running if the cover is not lowered.

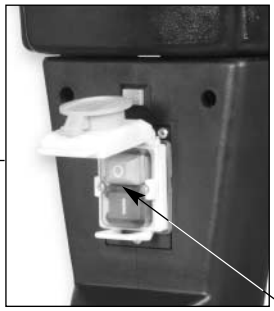
Pulleys and drive belts
(See figs 2 a ,b,c)

There are three pulley towers in the drillhead, the drive pulleys fixed to the motor shaft, the driven pulleys fitted to the quill, and the intermediate 'jockey' pulleys that connect the 'train' together with the two drive belts. A total of 12 speeds are available using the various belt positions on the pulleys. (See the chart on the machine or later in this manual.

Machine Illustration of the Drill Press

Fig 1a

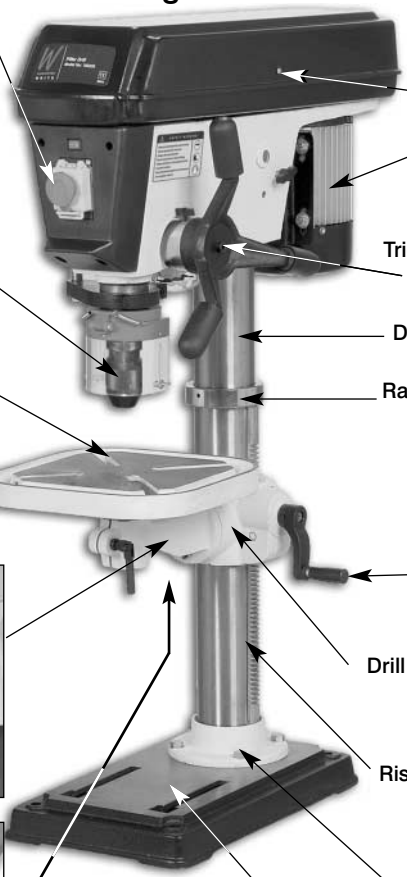
Fig 1b



On/Off switch shroud

On/ Off switches

Fig 1



Release screw

Motor

Tri-lever feed handle

Keyless chuck

Drill column

Drill table

Rack retaining collar

Clamping lever handle

Drill table mounting

Crank handle

Drill table mounting bracket

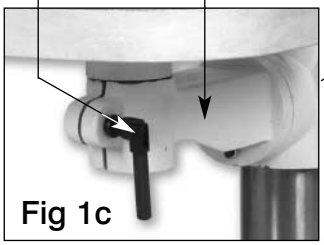
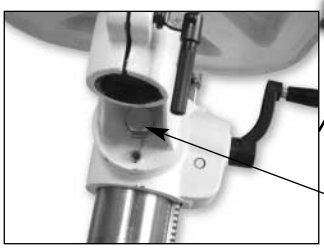


Fig 1c

Rise & fall rack

Flange



Mounting bracket bolt

Base casting

Release Screw (See fig 1)
A machine screw that drives through the pulley and drive belt cover into a tapped hole in a lug on the lower tray. It needs to be unscrewed and removed to release the top cover for access to the drive belt train. Lower the top cover and replace the screw when the new speed has been selected.

Safety micro-switch (See fig 2c)
The microswitch is the 'positive plunger' activated type, and will prevent the machine from running if the top cover and the lower tray are not closed together.

Head locking screws (See fig 2d)
These are two Hex. Socket grubscrews tapped through the wall of the column pocket in the drillhead casting. They should be loosened to allow the drill head to pivot about the pillar. When the required position is achieved, re-tighten them to lock the drillhead in position. The machine should not be operated with the drillhead in the unlocked state.

Motor (See fig 1)
Standard 240V 50Hz single phase motor rated at 250,370,550,560 & 650W

Motor mounting yoke (See fig 2d)
The motor is mounted on a yoke, formed by a mounting plate and two bars which also act as part of the tensioning system for the drive belt train. The yoke is mounted, via the bars, into two tunnel housings in the main body of the drillhead.

Drive belt tensioning lever (See fig 3a)
This lever is used to force the motor yoke mounting back against the drive belt train in order to tension it. The tensioning in the drive belt train is achieved by the motor pulley pulling on the jockey pulley,(via its belt) and the jockey pulling on the quill pulley (via its belt). It is good practice to release the tension in the drive belt train, if the machine is not going to be used for any lengthy period.

Motor yoke locks (See fig 2d)
These 'T' bolts are fitted in holes tapped through the walls of the tunnel housings in the drillhead that fit the motor yoke mounting bars. When the motor has been forced back to give sufficient tension to the drive belt train these bolts are tightened up and 'pinch' the motor yoke bars and lock the motor mounting in position.

Tri-lever feed handle (See fig 1)
Three levered handle that is used to drive the quill (and hence the chuck) up and down. The boss of the handle is fitted to a mounting boss on the end of a 'splined' gear shaft, it is held in location on the mounting boss by spigot/ spigot hole arrangement. The 'splined' gear shaft is, in turn, engaged in the rack cut into the quill body. The other end of the 'splined' shaft is mounted in a bearing pocket in the back of the positive depth stop assembly. Behind the mounting boss on the shaft is a contra-wound spring, this provides counter balance to the weight of the quill, arbor, chuck and drill, giving a more controlled 'feel' during drilling operations. It also retracts the quill when drilling is completed.

Machine Illustration of the Drill Press

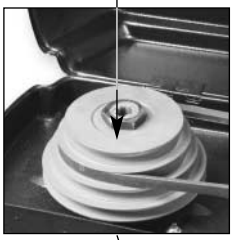


Fig 2a

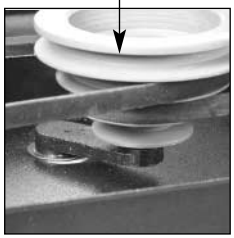


Fig 2b

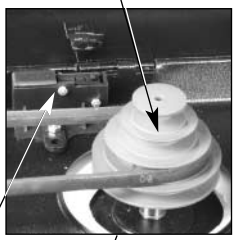


Fig 2c

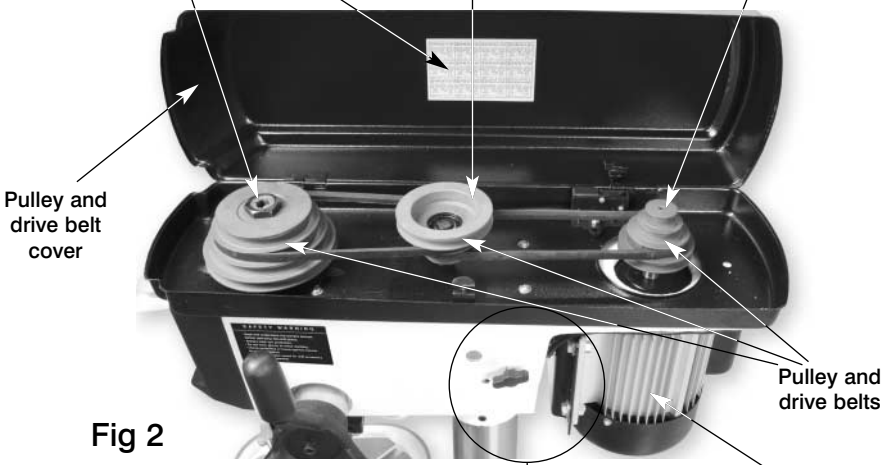


Fig 2

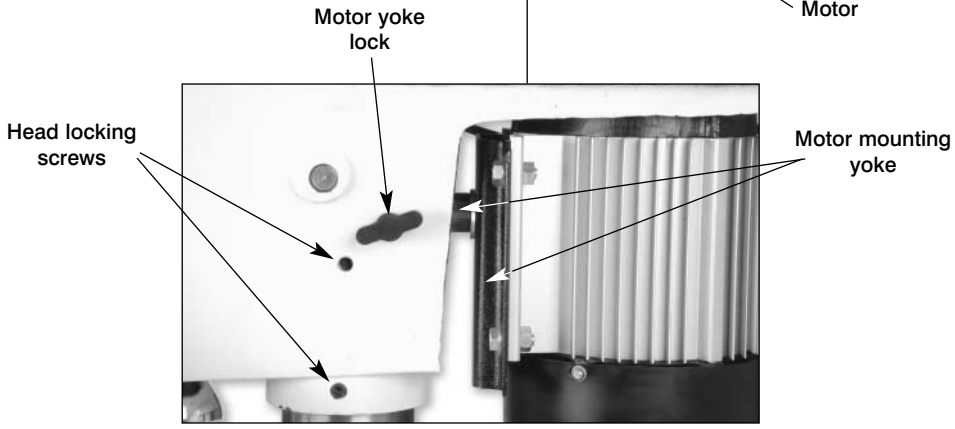


Fig 2d

Positive depth Stop
(See fig 3b)

This is a combination of a cast angle bracket & cover, which fits in a housing machined in the drillhead, (it mounts the bearing pocket for the end of the splined feed shaft and the return spring), the 'angle arm' of the bracket protudes out from the drillhead parallel with the base. There is a clearance hole bored through this arm. There is a round plate casting with a triangular extrusion clamped around the outer sleeve of the quill. Within the apex of this triangle a threaded hole mounts the depth stop control rod, which also feeds up through the clearance hole in the angle arm bracket. This rod is originally threaded, which allows it to be screwed through the hole in the plate and secured in position with a lock nut. The greater part of the rod over the top of the mounting plate has been milled flat (less than radius depth) to enable a scale decal to be fitted. A nut is fitted over to the depth stop rod below the angle arm bracket (to control the 'lift' of the quill) and a nut and a lock nut fitted above the angle arm bracket to limit the 'plunge'. The graduated scale can be read over the top of the angle arm bracket and will allow the depth of the drill plunge to be measured, or set.

Machine light
(See fig 3d & e)

An Edison screw lamp holder is mounted inside the Drill head, this will light the drill tip area from behind. The lamp is controlled by a small rocker switch mounted on the front of the drillhead.

On/Off switch
(See fig 1a & b)

An NVR switch panel mounted on the front of the machine. Green 'I' will start the machine; red 'O' to stop. Should power be interrupted whilst the machine is in use, the NVR will ensure the machine has not remained in the switched on condition when power is restored. The switch assembly is fitted with a moulded hinged shroud. This shroud has to be lifted to allow access to the On/Off switches. On the inside of the shroud is a moulded protrusion that depresses the Off button, this precludes the machine being switched on if the shroud is closed. There is the facility to clip the shroud closed, and the addition of a small padlock could render the machine secure from 'fiddling fingers'. The outside of the shroud has a large moulded 'mushroom' knob, which, in an emergency can enable the shroud to be 'slapped' closed, and the machine switched off quickly.

Speed select table
(See fig 2)

A small chart, which shows the pulley and belt configurations required to attain the various speeds available on the machine. It is stuck inside the top of the pulley and drive belt cover.

Quill lower bearing flange
(See fig 3f)

The quill lower bearing housing is extruded below the base line of the drillhead and formed into a circular flange in order to mount the chuck guard.

Chuck
(See fig 3g)

A good quality 3-16mm keyless chuck. It is fitted to the quill mandrel using a MT2/B16 arbor.

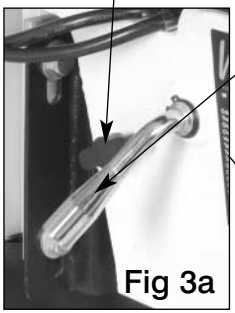
Chuck guard
(See fig 3g)

A hinged and telescopic guard that is fitted to the quill lower bearing flange. It has a spring fitted to the hinge geometry to hold the guard "over centre" to maintain it in the raised or lowered position. The guard shield can be extended or retracted (telescoped) as required, using the second leaf, the second leaf is held in position by two butterfly nuts and bolts.

Machine Illustration of the Drill Press

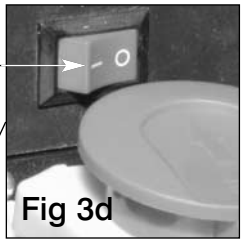
Motor yoke lock

Drive belt tensioning lever

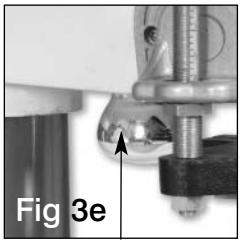


NOT FITTED TO ED16SB/WD13S/WD13L

Machine light switch NOT FITTED TO (ED16SB/WD13S/WD13L)



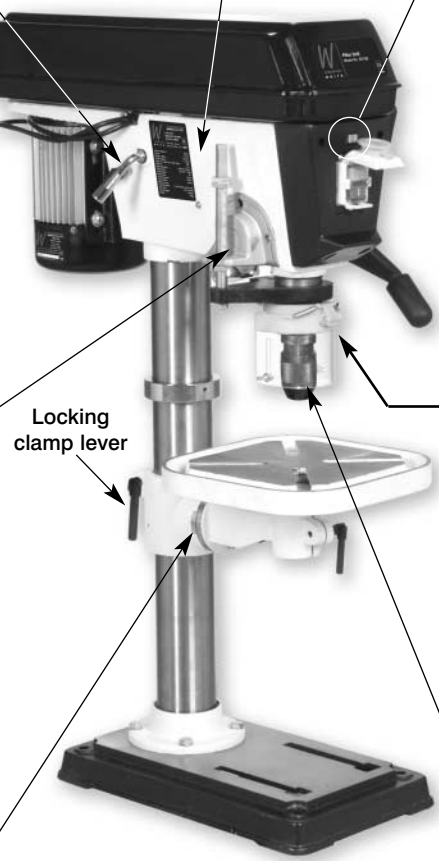
Drill head



Machine light

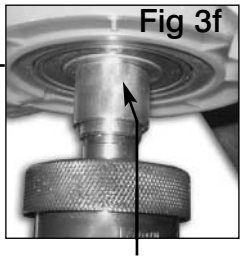
Depth stop control rod

Postive depth stop assembly



Locking clamp lever

Guard removed for clarity



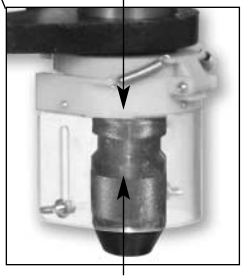
Quill lower bearing flange

Pointer

Table tilt scale

Fig 3

Chuck guard



Keyless chuck

WD13S & WD13L ILLUSTRATIONS

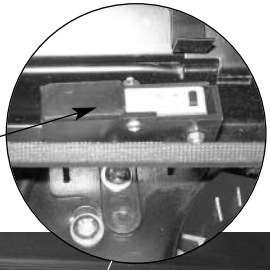


Fig 4b

Speed select table

Micro switch

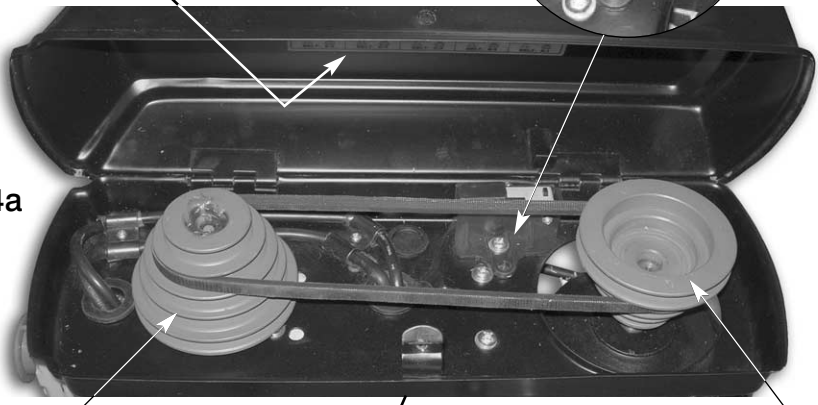
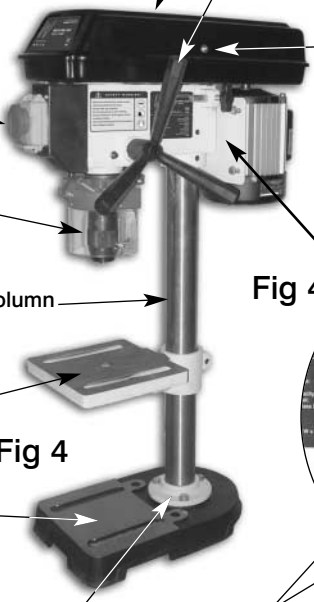


Fig 4a

Quill pulley

Tri-lever feed handle

Drive pulley



Release screw

On/Off switch shroud

Keyless chuck/guard

Drill column

Drill table

Fig 4

Base casting

Flange

Motor mounting yoke

Motor tension spring

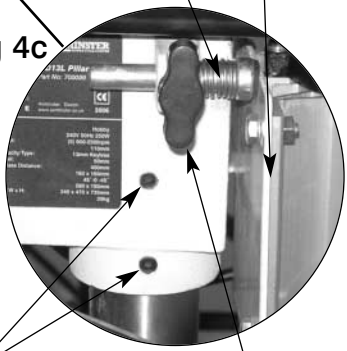


Fig 4c

Head locking screws

Motor yoke/belt tension lock

Changing Speed

Switch the machine off. Switch off the supply, and/or disconnect the machine from the supply. Remove the securing screw from the off side of the pulley and drive belt cover, put carefully aside and raise the cover clear. Now is a good time to give the drive belt and pulley enclosure a good clean. (If it needs it? There are sometimes rubbings from the belts and general dust and debris.) Locate and loosen the motor yoke locks. Locate the drive belt tensioning lever and turn it clockwise, to move the motor yoke mounting “in” (See fig 5a & 5c). This should have removed the tension from the drive belts. To release the tension on (ED16SB & WD16SB) loosen the two motor yoke locks on either side of drilllhead, push the motor assembly up against the drillhead casting, thus allowing the jockey pulley to pivot. To release the tention on (WD13S,WD13L) loosen the motor yoke/belt tensioning lock which loosens the tension spring, then push the motor up against the drillhead casting. (See fig 4,4a & 4c) Refer to the Speed Select Table and ascertain the belt positions for the speed you require. Move the belt/s to these positions, commence the tensioning operation by pushing the jockey pulleys to tension the driven to jockey belt (Have a care not to trap fingers, the pulleys are free to move). Tension the whole belt train by turning the drive belt tensioning lever anti-clockwise, to move the motor yoke mounting “out” (See fig 5b & 5d). Keeping the belt train under tension; tighten the motor yoke locks. Lower the belt and pulley cover carefully, (remember the microswitch) refit the securing screw and tighten. Re-connect the supply and switch on. Check the drill runs smoothly, no hard vibration, no squeaks or squeals of loose belts etc., etc., If all seems satisfactory, recommence drilling operations.

Fig 5

Fig 5a

Fig 5b

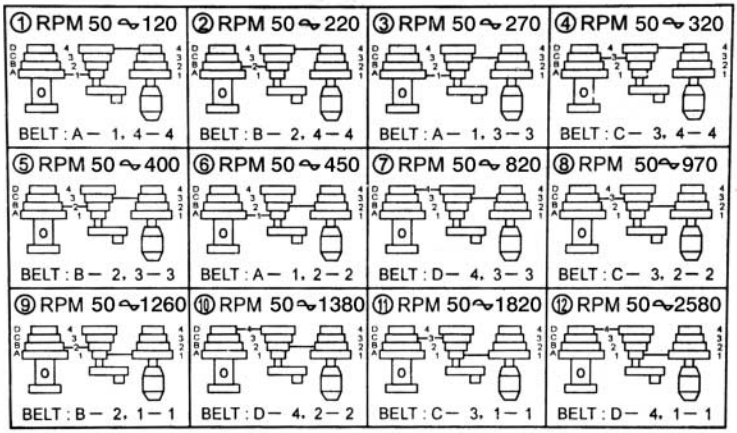
Step 1

Step 2

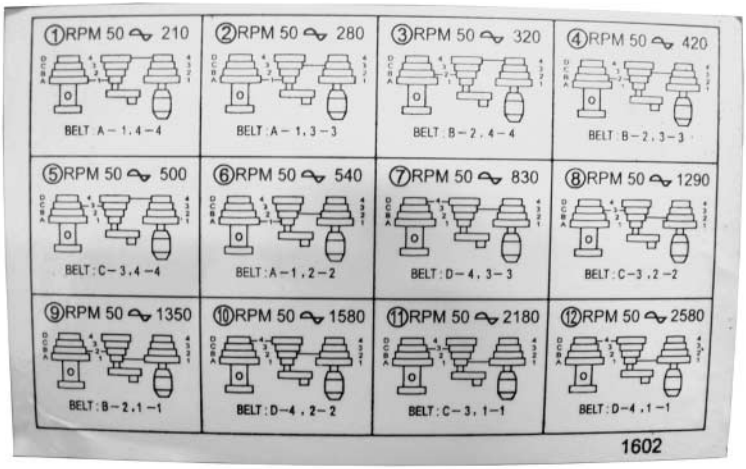
Fig 5c

Fig 5d

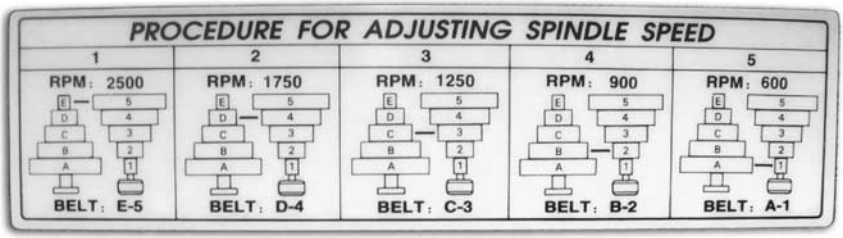
SPEED TABLE FOR: WD16B,WD16F, ED16B2, ED16SB



SPEED TABLE FOR: ED16SB & WD16SB



SPEED TABLE FOR: WD13S & WD13L



General Safety Instructions for Drilling Machines

1. Do not operate the machine without carrying out a preliminary inspection.

2. Check that the speed is correct for the planned operation, and the upper drive belt cover is closed and fastened secure.

3. Check the drill bit is the correct size and type, is correctly fitted and tightened in the chuck.

4. Make sure that the drillhead, the table bracket arm, the table tilt and the table swivel clamps are all locked before any drilling is attempted.

5. Do not attempt to carry out any drilling operation on material that has not been secured to the drill table, either by vise or clamp.

6. Remove any tools (chuck key, spanners etc), that may have been used in setting up operations and put them away in their correct stowage positions.

7. Try to arrange the drilling operation so that the drill tip does not come in contact with the table.

8. Always allow the drill to stop before removing drillings or swarf from around the job or the table.

9. NEVER remove 'flying' swarf strands from the drill whilst it is turning.

10. It is a good precaution to wear eye protection when drilling, especially using small drills, or very hard material that produces small chips.

11. It is not a good idea to wear gloves when operating a drill press.

12. After the job is completed, remove all tools and accessories from the machine, check that drill bits are still sharp and re-useable. Clean the machine down thoroughly, including removing coolant or cutting compounds from the drill table. Lightly coat all metal surfaces with a light oil coating. Disconnect the machine from the supply. Secure the cable/plug clear of the floor.

Excessive dust in the motor can cause excessive heat to develop. Every effort should be made to prevent foreign material from entering the motor. When operated under conditions likely to permit accumulations of dust, dirt or waste, a visual inspection should be made at frequent intervals. Accumulations of dry dust can usually be blown out successfully.

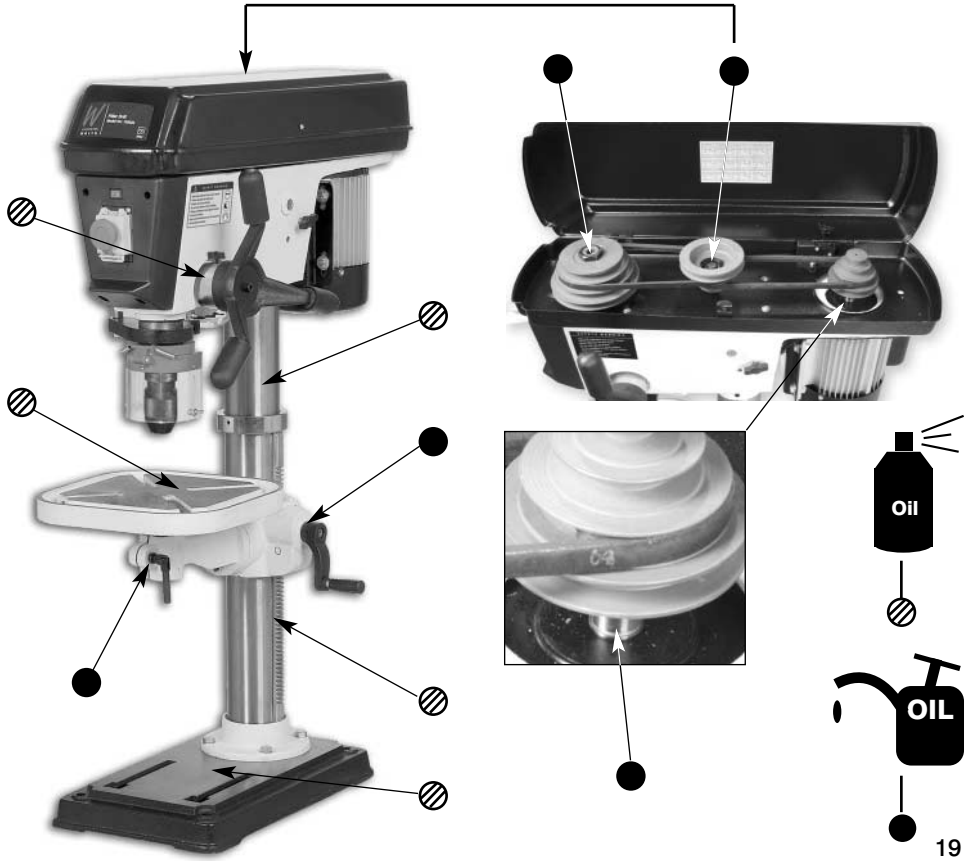
Caution: To avoid eye injury or adverse reaction to dust, high pressure hoses should not be used especially in poorly ventilated areas. The operator performing this cleaning function should wear safety goggles and dust filter mask.

After cleaning all dust and debris a light coating of machine oil on the quill then to spread the oil. If the machine is going to stand idle for any length of time, a light coat of spray or machine oil over the column and table will prevent rusting.

DO NOT USE THE MACHINE IF THE POWER CABLE HAS BECOME DAMAGED.

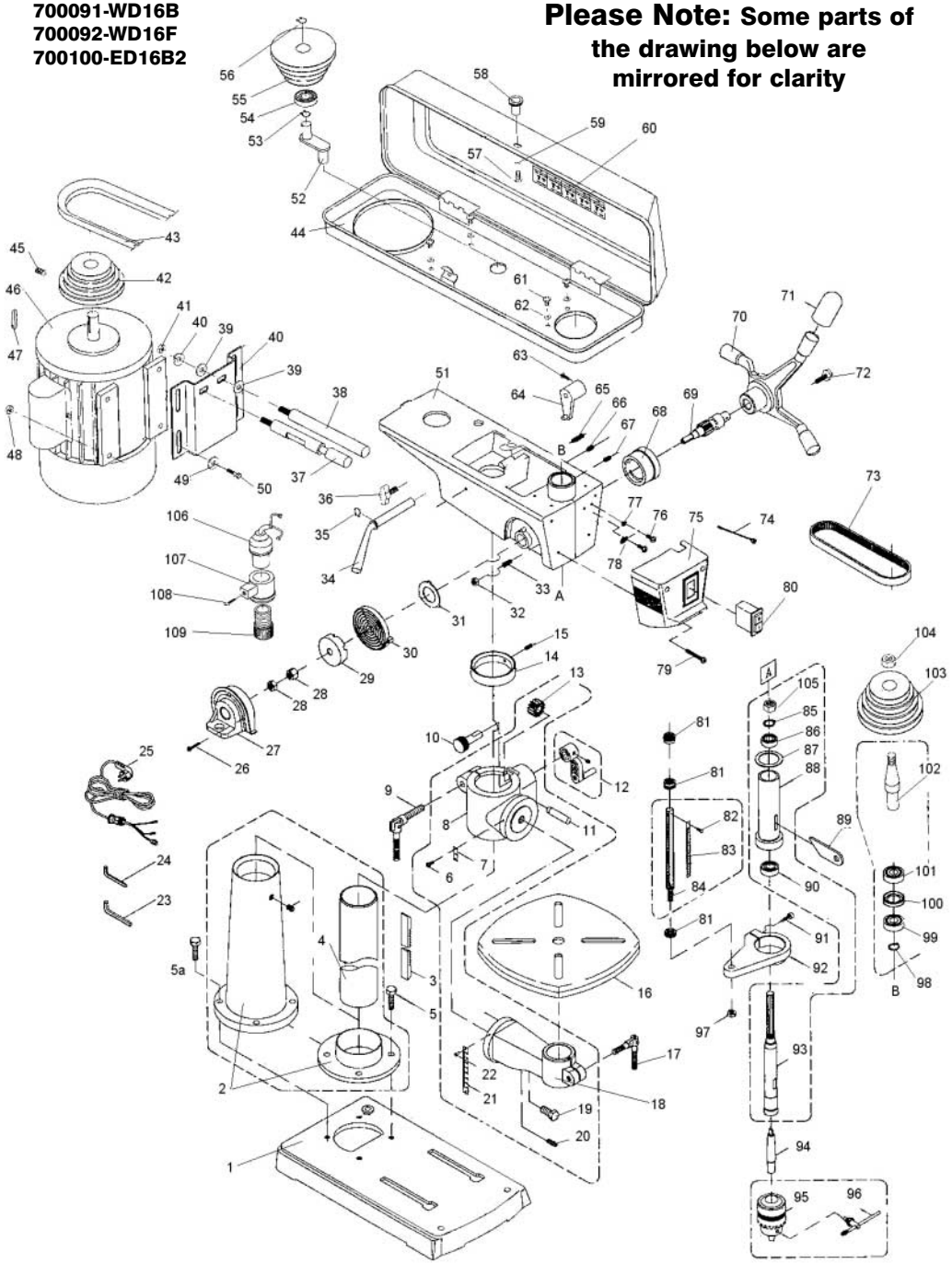
If any servicing (other than the above cleaning) becomes necessary the unit should be returned to your supplier or repaired by a qualified electrician.

N.B. The speed of the motor cannot be regulated or changed - no adjustment is necessary.



700091-WD16B
700092-WD16F
700100-ED16B2

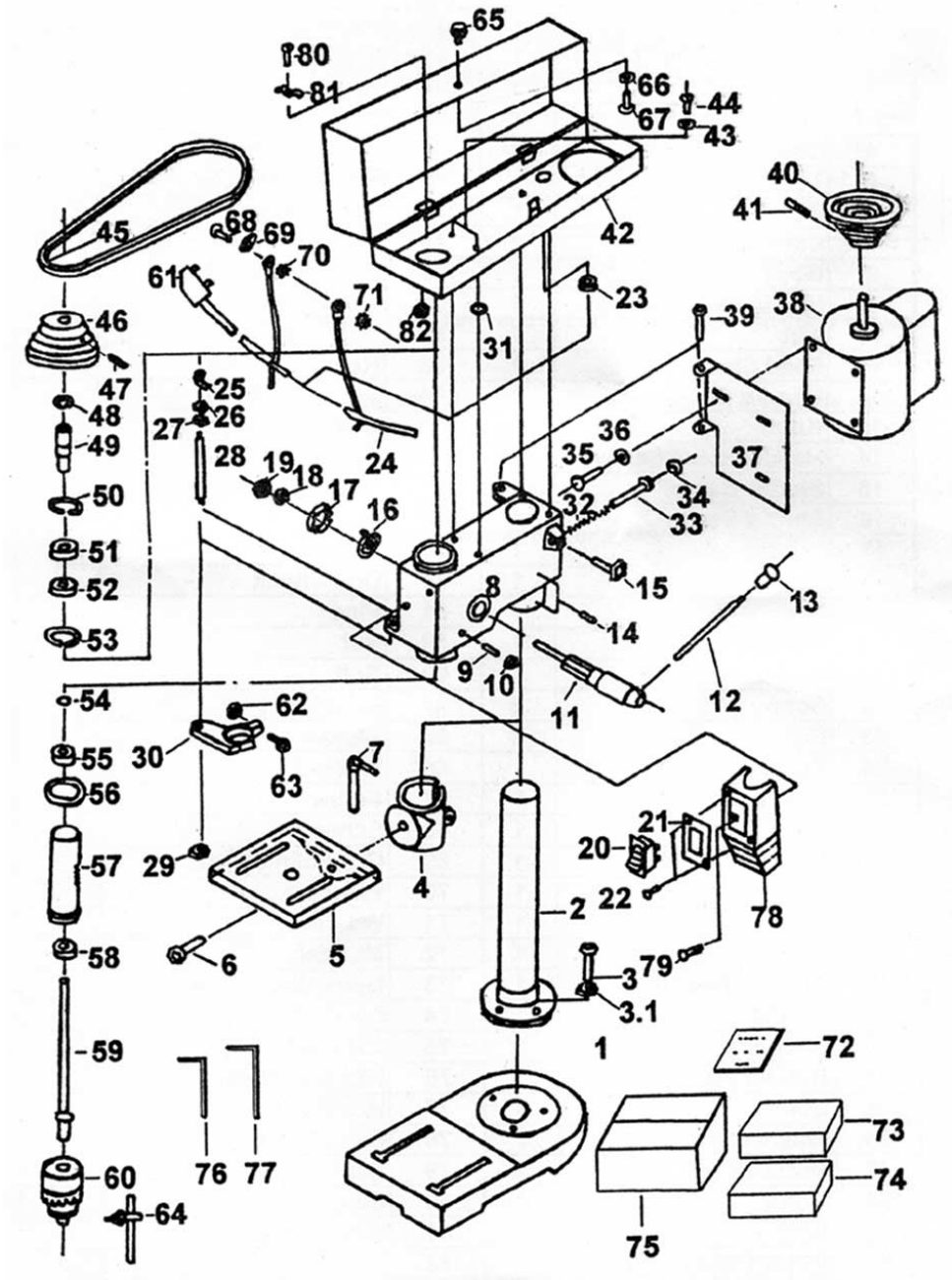
Please Note: Some parts of the drawing below are mirrored for clarity



Ref No	Description Unit	QTY	Ref No	Description Unit	QTY
1	BASE	1	33	SCREW SPECIAL SET	1
2	COLUMN SHOULDER	1	34	SHIFTER BAR	1
3	RACK	1	35	C-CLIP	1
4	COLUMN	1	36	SLIDE BAR BOLT	2
5	HEX BOLT	4	37	SLIDE BAR	1
6	SCREW	2	38	SLIDE BAR	1
7	MARK	1	39	WASHER	2
8	TABLE BRACKET	1	40	MOTOR BASE	2
9	CLAMP BOLT	1	41	NUT	2
10	WORM GEAR	1	42	MOTOR PULLEY	1
11	SHAFT	1	43	V-BELT	1
12	HANDLE	1	44	PULLEY COVER	1
13	GEAR	1	45	SET SCREW	1
14	RACK RING	4	46	MOTOR	1
15	SET SCREW	1	47	KEY	1
16	TABLE	1	48	NUT	4
17	TABLE BOLT	1	49	WASHER	4
18	TABLE ARM BRACKET	1	50	HEX BOLT	4
19	HEX BOLT	2	51	BODY	1
20	PIN	1	52	CENTER SHAFT	1
21	MARK	1	53	C-CLIP	1
22	SCREW	2	54	BALL BEARING	1
23	WRENCH 5mm	1	55	CENTER PULLEY	1
24	WRENCH 3mm	1	56	C-CLIP	1
25	POWER CORD	1	57	SCREW	1
26	SCREW	3	58	KNOB	1
27	COVER	1	59	WASHER	1
28	NUT	2	60	SPEED CHART LABEL	1
29	SPRING CAP	1	61	SCREW	4
30	TORSION SPRING	1	62	WASHER	4
31	SPRING COVER	1	63	HEX BOLT	1
32	NUT	1	64	SHIFTER	1

Ref No	Description	Unit	QTY
65	SET SCREW		1
66	SET SCREW		1
67	SET SCREW		2
68	DEPTH RING		1
69	FEED SHAFT		1
70	HANDLE		1
71	HANDLE COVER		1
72	CAP BOLT		1
73	V-BELT		1
74	SCREW		2
75	SWITCH BOX		1
76	SCREW		2
77	WASHER		2
78	WASHER		1
79	SCREW		2
80	SWITCH		1
81	NUT		3
82	SCREW		2
83	SCALE		1
84	SCALE BASE		1
85	C--CLIP		1
86	BALL BEARING		1
87	RUBBER WASHER		1
88	SPINDLE SLEEVE		1
89	WEDGE		1
90	BALL BEARING		1
91	CAP BOLT		1
92	PLATE		1
93	SPINDLE		1
94	ARBOR		1
95	CHUCK		1
96	CHUCK KEY		1
97	NUT		1
98	C--CLIP		1
99	BALL BEARING		1
100	SPACER		1
101	BALL BEARING		1
102	INSERT PULLEY		1
103	SPINDLE PULLEY		
104	PULLEY NUT		1
105	NUT		1
106	LIGHT BODY		1
107	LIGHT BASE		1
108	SCREW		1
109	LIGHT SCREW		1

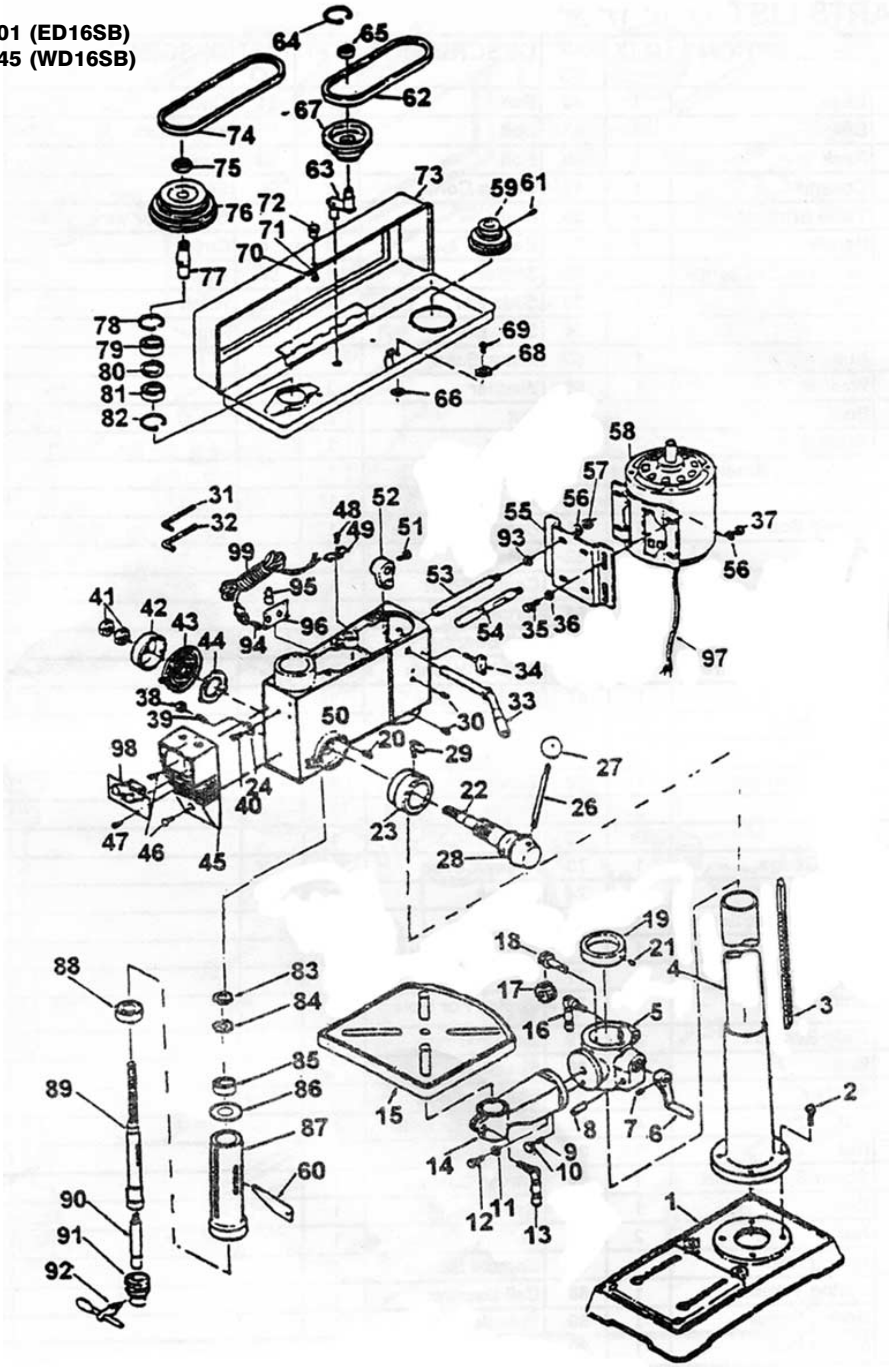
700090-700099 (WD13S & WD13L)



700090-700099 (WD13S & WD13L)

PART NO.	DESCRIPTION	Q'TY	PART NO.	DESCRIPTION	Q'TY
1	Base	1	42	Pulley Cover	1
2	Column	1	43	Washer	4
3	Bolt	3	44	Screw	4
3-1	Washer	3	45	V-Belt	1
4	Clamping Sleeve	1	46	Spindle Pulley	1
5	Table	1	47	Headless Set Screw	1
6	Bolt	1	48	Retain Ring	1
7	Clamping Lever	1	49	Internal Spline Sleeve	1
8	Body	1	50	Retaining Ring	1
9	Headless Set Screw	1	51	Ball Bearing	1
10	Nut	1	52	Ball Bearing	1
11	Feed Shaft	1	53	Retaining Ring	1
12	Handle Bar	3	54	Retaining Ring	1
13	Knob	3	55	Ball Bearing	1
14	Headless Set Screw	2	56	Collar	1
15	Shifter Bar	1	57	Spindle Sleeve	1
16	Spring Seat	1	58	Ball Bearing	1
17	Spring Cap	1	59	Spindle	1
18	Nut	1	60	Drill Chuck	1
19	Nut	1	61	Plug	1
20	Switch	1	62	Nut	1
21	Clamping Sheet	1	63	Bolt	1
22	Screw	2	64	Chuck Key	1
23	Bush	2	65	Handle	1
24	Wire	1	66	Washer	1
25	Pointer	1	67	Screw	1
26	Nut	1	68	Screw	1
27	Nut	1	69	Grounding Symbol	1
28	Limit Bolt	1	70	Washer	1
29	Nut	1	71	Washer	1
30	Heel Block	1	72	Manual	1
31	Rubber Washer	1	73	Upper-Inner Carton	1
32	Spring	1	74	Lower-Inner Carton	1
33	Slide Bar	1	75	External Carton	1
34	Rubber Pad	1	76	Hex Key 3mm	1
35	Bolt	3	77	Hex Key 4mm	1
36	Washer	3	78	Switch Box	1
37	Motor Base	1	79	Screw	2
38	Motor	1	80	Screw	2
39	Bolt	2	81	Wire Clamps	2
40	Motor Pulley	1	82	Nut	2
41	Headless Set Screw	1			

700101 (ED16SB)
951645 (WD16SB)



700101-951645 (ED16SB & WD16SB)

PART NO	DESCRIPTION	Q'TY	PART NO	DESCRIPTION	Q'TY	PART NO	DESCRIPTION	Q'TY
1	Base	1	46	Bolt	4	91	Chuck	1
2	Bolt	4	47	Bolt	2	92	Key Chuck	1
3	Rack	1	48	Bolt	1	93	Washer	2
4	Column	1	49	Clamp Cord	1	94	Screw	2
5	Table Bracket	1	50	Body	1	95	Connector wire	2
6	Handle	1	51	Bolt	1	96	Cover	1
7	Headless Set Screw	1	52	Shifter	1	97	Wire	1
8	Shaft	1	53	Slide Bar	1	98	Witch	1
9	Pin	1	54	Slide Bar	1	99	Plug	1
10	Nut	1	55	Motor Base	1			
11	Washer	1	56	Washer	2			
12	Bolt	1	57	Nut	2			
13	Table Bolt	1	58	Motor	1			
14	Table Arm Bracket	1	59	Motor Pulley	1			
15	Table	1	60	Wedge	1			
16	Clamp Bolt	1	61	Headless Screw	1			
17	Gear	1	62	V-Belt	1			
18	Warm Gear	1	63	Center Shaft	1			
19	Rack Ring	1	64	Circles For Hole	1			
20	Pin Stop	1	65	Ball Bearing	2			
21	Headless Set Screw	1	66	rubber Washer	4			
22	Feed Shaft	1	67	Center Pulley	1			
23	Scale Ring	1	68	Washer	4			
24	Washer	1	69	Screw	4			
25	Handle Body	1	70	Screw	1			
26	Handle	3	71	Washer	1			
27	Knob	3	72	Knob	1			
28	Staff Gauge	1	73	Pulley Cover	1			
29	Slide Bar Bolt	1	74	V - Belt	1			
30	Headless Set Screw	1	75	Pulley Nut	1			
31	Key Hexagon Screw	1	76	Spindle Pulley	1			
32	Key Hexagon Screw	1	77	Insert Pulley	1			
33	Shifter Bar	1	78	Circles For Hole	1			
34	Slide Bar Bolt	2	79	Ball Bearing	1			
35	Bolt	4	80	Spacer	1			
36	Washer	4	81	Ball Bearing	1			
37	Nut	4	82	Circles For Hole	1			
38	Nut	1	83	Round Nut	1			
39	Screw Special Set	1	84	Thrust Bearing	1			
40	Bolt	1	85	Ball Bearing	1			
41	Nut	2	86	Rubber Washer	1			
42	Spring Cap	1	87	Spindle Sleeve	1			
43	Spring Torsion	1	88	Ball Bearing	1			
44	Spring Cover	1	89	Spindle	1			
45	Switch box	1	90	Arbor	1			

Axminster Pillar Drills

700090,700091,700092,700099
700100,700101,951645

Axminster Reference No's:
WD16B, WD16F, WD13S, WD13L, ED16B2, WD16SB

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